ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec701

Predictors of Health Care Workers (HCWs) International Migration Intention: A Public Health Concern in Nigeria

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Publication Date: 2025/12/24

Abstract:

- ***Background***

Many African and developing countries continue to witness it citizens leaving their homeland to developed countries like United Kingdom and the Americas all in the name of searching for greener pastures. Recently, this trend has been worrisome especially in the healthcare sector with a significant deficit in skilled health workforce. This study aims to investigate the predictors of migration intention and the strategies to mitigate such intention among Nigerian healthcare workers.

- ***Methods***

A cross sectional survey design was employed in this facility based study. Quantitative data were collected among categories of healthcare workforce. Semi-structured validated questionnaire were administered on the eligible participants. Data were analyzed and the level of significance was set at P-value < 0.05.

- ***Results***

Majority of the HCWs were females (72.2%) with the age range between 30 and 39 (36.4%), with a mean age of 37.2 ± 9.2 years. Majority of the respondents were Nurses with (54.0 %) which was closely followed by physicians (16.6%). Analysis of intention to practice outside Nigeria revealed more than two-third of the respondents (74.9%) while majority of the respondents (88.8%) have also taken several steps and efforts to actualize their intention. Opportunity to earn more money (78.1%) was the predominant nucleus of their intention. The result showed significant (p<0.05) relationship between migration intention and the healthcare workers marital status (X^2= 18.8; p-value= 0.00*), educational level (X^2= 46.5; p-value= 0.00*) and profession (X^2= 53.4; p-value= 0.00*). Result also indicated a significant (p<0.05) relationship between migration intention and the working conditions with their p-values = 0.00*).

- ***Conclusion***

Emigration intention among Nigeria HCWs appears to be very high specifically among the nurses and other HCWs. Improved remuneration remains a key strategy to mitigate migration intention thereby reducing the huge deficit in the Nigerian's health care work force.

Keywords: *Emigration, Healthcare Workers, Brain Drain, Mitigation.*

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec701

How to Cite: Oye, Modupe Jokotola; Famakinde. A. A. J.; Adeniran, J. A. (2025) Predictors of Health Care Workers (HCWs) International Migration Intention: A Public Health Concern in Nigeria. *International Journal of Innovative Science and Research Technology*, 10(12), 1440-1450. https://doi.org/10.38124/ijisrt/25dec701

I. INTRODUCTION

Globally, shortage of skilled health care workers has been a challenging development with poor regions of the world being the worst hit. The Sub-Saharan Africa inclusive of Nigeria continues to experience surge in migration otherwise known as "brain drain" or ''JAPA Syndrome" amongst its health care workforce resulting in the weakening of the already fragile health care system. Over time, there has been noticeable steady increase in the migration of different categories of the health work force.

Among various reasons, the global financial crisis has been fingered to influence the trends of health workers migration in recent times.

Migration unlocks a host of opportunities for the individuals and countries involved. For instance migration represents for people access to employment, acquisition of skills and qualifications, improvement of life conditions, while for both countries of origin and destination it is a driver of growth and development [1].

The term "Brain Drain" was coined by the British Royal Society in the 1960"s, to describe the emigration of scientists and technologists to North American from post Europe [2]. On the other hand, brain drain may refer to the loss resulting from excessive emigration of skilled professionals. This phenomenon has been a critical challenge to health care delivery system in many countries in subs Saharan African including Nigeria. Many of the skilled workers often seek better opportunities in more developed countries, which have hampered the achievement of the Millennium Development Goals and also a major threat to the achievement of the Sustainable Development Goals (SDGs) [3]. Severe shortage of qualified healthcare workers, lack of political will to recruit appropriate categories of health workers to practice within the scope of their respective training and inaccessibility of skilled care to many women are issues of serious concern to the researchers [4]. The availability of sufficient and appropriately distributed skilled health personnel especially at the PHC level is an important determinant of the strength of a health system [5]. This is especially so in resource-poor countries that have already weak healthcare systems and demotivated PHC workers, in the face of a high and increasing burden of communicable and non-communicable diseases [6].

This migration always being tagged as mere "brain drain" from poor to rich countries is speedily assuming a complex magnitude in developing countries. To achieve the goal of Universal Health Coverage (UHC), a critical mass of qualified health workforce is essential. UHC, defined as people receiving the quality services they need without incurring financial hardship, requires a health workforce that can effectively deliver a wide range of promotive, preventive, curative health care services. Addressing local and international migration issues, as discussed in this publication, is part and parcel of these efforts to mitigate the menace.

- *Global Challenge*

Globally, more than one billion people (women and children being the majority) lack access to quality health services [3]. The huge shortage, imbalanced skill mix and uneven geographical distribution of health workers in health services, including maternity service have been acknowledged in most countries[7]. As at 2018, Nigeria had a SHW density of 1.83 per 1000[8]. The factors contributing to the low density of SHWs include crisis in the educational sector leading to low production of an adequate health workforce, poor management/leadership within the health system, political, and economic crises leading to an increasing trend of migration of SHWs from Nigeria [9].

Between 2008 and 2021, a total of 36,467 Nigerian doctors migrated to the United Kingdom. There was a steady increase from 1,798 that migrated in 2008 to 4,880 in 2021. A larger trend was observed for nurses. Between 2002 and 2021, a total of 60,729 Nigerian nurses had migrated to the United Kingdom. There was a steady increase from 1,393 nurses that migrated in 2002, to 5,543 in 2021 [10]. In their health facility-based survey in China[11], suggest the need for improvement in job satisfaction of physicians, to reduce the intention to quit due to workplace burnout. Also, a study amongst registered nurses in a nursing home in the USA suggested that stabilization of leadership or chain of command, was useful towards retention of health care workers [12] (Hunt *et al.,* 2019). Severe shortage of qualified healthcare workers, lack of political will to recruit appropriate categories of health workers to practice within the scope of their respective training and inaccessibility of skilled care to many women are issues of serious concern to the researchers [4]

II. DRIVERS OF INTERNATIONAL MIGRATION INTENTION AMONG HEALTH PERSONNEL

There is a number of push and pull factors that affect migration [13]. Critical analysis of global migration and brain drain has frequently been done using the "push-pull" factors approach. This approach was popularized in the 18th century by Lee [14] to investigate the variables influencing brain drain and migration. According to Lee's push and pull theory, correlation exists between push variables in the country of origin and consequently pull elements in the country of destination, and vice versa. When these opposing reasons are combined, there is typically a net outflow of healthcare workers (HCWs) from African nations [15].

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➢ *Push Factors*

These are the local circumstances in the countries of origin that have compelled healthcare workers to depart to other countries. These could be societal, political, health-system, professional, work-related, or economic considerations. Lack of employment is one of the economic causes influencing migration. According to a researcher study,[16] lack of jobs and the overcrowding of developing nations push people to migrate to developed nations. Migrants are often motivated by low living standards who want to better their and their families' lives. Migrants can increase their salaries and participate in the market more efficiently by moving to industrialized nations [17]. The global nursing shortage is not the sole determining factor why nurses enter into migration process; the underlining reasons are complex [18].

➢ *Pull Factors*

These are traits in beneficiary nations that could draw nurses. These elements may include social and familial dynamics, professional and career advancement, workplace culture, job stability, pay, and perks [19]. Access to better living conditions, advanced infrastructure, and social amenities in developed nations is also a strong draw. Approximately 35% of migrant health workers priorities better living standards, emphasizing the appeal of enhanced well-being for themselves and their families [19]. Developed countries might provide more professional recognition and respect. Healthcare workers frequently look for settings where they can contribute significantly to the field and where their experience is respected [20].

III. EFFECT OF MIGRATION ON THE COUNTRY'S HEALTH CARE SYSTEM

Studies have shown that there are significant economic benefits of human capital flight both for the migrants themselves and the receiving country. [21] An estimated $500 million is spent on medical education of workers from Africa who will eventually emigrate. This is huge revenue spending on the economy of many poor African countries which may be contributing to poor infrastructures in their health sector. There are concerns about the impact of Skilled Health Worker (SHW) migration on Nigeria's health system. These impacts include an increase in the clinical workload, reduction in the quality of care given by SHWs who remain, and an increase in the mortality and morbidity patterns arising from a lack of access to essential health care services.[23] Thus, there are series of positive and negative effects of brain drain in the countries of origin, with many developing countries devising strategies to mitigate. However, it is observed that emigration of skilled workers to the developed countries may contribute to improved education and better economy of developing countries.

➢ *Strategies to Mitigate Health Workers Migration*

The Economic Commission for Africa (ECA) underscores the severity of the brain drain in Africa, surpassing other developing regions, and emphasizes the urgent need to close the labor force gap with developed nations[24]. The latest ECA report reveals a substantial loss of Africa's skilled workforce to developed countries, highlighting the imperative to enhance qualified individuals across all fields. With around 70% of Ghanaian doctors trained in the 1990s believed to have emigrated and a significant African presence in the USA, addressing health worker brain drain is critical to prevent compromising patient care quality, worsening labor shortages, and straining healthcare infrastructure on a global scale[25, 26]. The urgency to mitigate the challenge of health workers migration is underscored by the increasing shortage of skilled healthcare workers in critical region in Sub-Saharan Africa. The reasons behind this are multifaceted. The decision to migrate abroad In many instances is influenced by the knowledge of an opportunity to migrate through online recruitment, job fairs, advertisements, or the use of head-hunting firm. Strategies for the retention of health care workers and mitigating intentions of international migration are critical to the sustenance of vibrant health care system in developing countries. In the contemporary employment landscape, characterized by a power shift from employers to employees, organizations are compelled to employ various activities, often in the form of policies, to ensure the sustained presence of their workforce throughout their careers[27]. The effective implementation of employee retention strategies fosters commitment and loyalty among staff while simultaneously mitigating the costs associated with employee turnover.[28] Understanding the reasons behind employee migration intention is pivotal in deploying successful strategies.

Retention strategies involve training, employee rewards, opportunities for career advancement, job rotation, improved working environment and job security. In response to the evolving dynamics of the workforce, organizations are recognizing the need for a one-size-fits-all approach. They are now navigating the intricate terrain of employee retention, with remuneration emerging as a cornerstone strategy. Drawing on previous studies [29,30], which emphasize the impact of meritocracy and other employee engagement on employee retention, it is evident that these strategies yield positive results. By aligning company branding, succession planning, and meritocracy, organizations can create an environment where healthcare professionals feel valued, ultimately influencing their decision to stay[31]. Financial incentives should not stand alone but be complemented by initiatives that promote positive company culture. Employee engagement programs, such as mentorship, professional development, and frequent feedback mechanisms, strengthen a healthcare worker's sense of purpose.

IV. THEORETICAL FRAMEWORK

This research work on migration among health care workers is based on Social Exchange Theory. The Social Exchange Theory posits that individuals engage in relationships and make decisions based on a rational assessment of costs and benefits. According to this theory, individuals weigh the rewards and costs associated with their actions and make choices that maximize their perceived benefits. Applied to the context of health workers migration, this theory suggests that employees decide to remain with an organization when they perceive the benefits of staying

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec701

outweigh the costs of leaving (Blau, 1964). These benefits may include rewards such as job satisfaction, professional development opportunities, supportive work environment, competitive salary, benefits package, and recognition. On the other hand, the cost may include poor working conditions, lack of career advancement opportunities, poor compensation, and lack of support from leadership.

➢ *Objectives of the Study*

The study therefore sets out to examine the predictors of international migration intention among health care workers and proffer health service motivators to halt the perennial challenges of shortage of health care work force in Nigeria.

➢ *Research Hypotheses*

- *Research Question*

✓ What is the level of international migration intention among health care professionals in Nigeria
✓ What are the factors influencing the intention of international migration among HCWs in Nigeria.
✓ What are the strategies for mitigating international migration intention among health care workers in Nigeria.

- *Hypothesis*

✓ H_{01}: There is no significant relationship between socio-demographic variables (age, sex, profession, years of experience, level of education, marital status and migration intention among health care workers in Nigeria.

✓ H_{02}: There is no significant relationship between working environment and intention of international migration among health care workers in Nigeria.

➢ *Significance of the study*

Firstly, the result of the study will be of benefit as it will provide an in depth knowledge of the causes of intention for international migration of health care workers which have been a cause of "Brain drain" with devastating effect on the health system. Secondly, it will provide information that will be of help to the policy makers which might propel them to implement policies that will favour health workers in flexible work schedule, remuneration and favorable work environment. This will motivate staff retention in the health sector.

V. MATERIAL AND METHODS

➢ *Research Design*

This study is facility based and employed a descriptive cross-sectional research design to determine the predictors of intention of international migration among health care work force at the Federal Medical Center, Owo, Ondo State.

➢ *Target Population*

The target population for this study comprised all the health workers in the hospital which includes physicians, nurses, dieticians, pharmacists, medical laboratory scientists, physiotherapist, and radiologists among others.

➢ *Research Setting*

This study was carried out in Federal Medical Center, Owo, Ondo State. It is a public tertiary health care facility where medical services are provided 24 hours. The facility provides specialist care in general surgery, orthopaedic surgery, obstetrics and gynaecology, Ophthalmology, paediatrics, family and community medicine. This hospital has a landmass of about 13 hectares with about 300 bed spaces with an average monthly occupancy of about 65-70%.

➢ *Sample Size Determination*

The population size of health workers in FMC, Owo was estimated at 350 (Hospital records, 2024) .This was used to determine the sample size for the study using Taro Yamane's formula thus:

$$n = \frac{N}{1+N\,(e)^2}$$

Where N= Population= 350
n = Sample size (?)
e = Level of significance at 5% (0.05)

1 = Constant

$$n = \frac{350}{1+ 350\,(0.05^2)}$$

$$n = \frac{350}{1+ 350\,(0.0025)}$$

$$n = \frac{350}{1+ 0.87}$$

= 187.1 approximately 187

The sample size that will be used for this study is 187

➢ *Sampling Technique*

Multi-stage sampling technique was used for the study. In the first stage, Purposive sampling techniques was used to select Federal Medical Center, Owo as the study area. The list and numbers of health workers in each department of the hospital was collected from the staff records department.

In the second stage, convenience sampling technique was used to obtain the number of health workers in each wards of the hospital and systematic sampling technique was used to select 187 health workers from the whole wards in the hospital community that was used for the study.

➢ *Psychometric Validation of Instrument*

The instrument for the data collection was a self-developed, structured and validated questionnaire that elicits information from respondents. Questions were developed by the researcher according to the research objectives. The questionnaire was pretested among health workers at General Hospital, Owo that were not included for the research. The psychometric properties of the instrument were approved, and dependability examination utilizing Cronbach's alpha and

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec701

intra-class relationship coefficients (ICC) was likewise performed.

VI. STATISTICAL ANALYSIS

Data analysis was performed using Statistical Package for Service Software (SPSS) version 25.0. This summarized using descriptive statistics of mean, standard deviation, frequency and percentage. Inferential statistics of Chi-square was used to determine significant association between the variables for the hypotheses at P- Value of $p<0.05$

➢ *Eligibility Criteria*

All consenting health care workers who were willing to complete the questionnaire on the appointed dates of questionnaire administration were recruited for the study irrespective of gender and social economic class.

➢ *Ethical Approval*

Ethical approval was sought and obtained from the Ethics and Research Committee of the Federal Medical Center, Owo through the presentation of a letter of introduction to carry out the study. Respondents gave informed verbal consent while the aims of the study were explained.

➢ *Period of Study*

This study was carried out between October-December, 2024.

VII. PRESENTATION OF RESULTS

Table 1: Socio-Demographic Characteristics of the Health Care Workers (n = 187)

Variables	Frequency (F)	Percentage (%)	
Age group			
20-29years	42	22.5	
30-39years	68	36.4	
40-49years	59	31.6	
50years and above	18	9.6	**Mean age:** 37.3 ± 9.2
Sex			
Male	52	27.8	
Female	135	72.2	
Marital Status			
Single	22	11.8	
Married	142	75.9	
Single parent	17	9.1	
Widow (er)	6	3.2	
Ethnicity			
Yoruba	132	70.6	
Igbo	35	18.7	
Hausa	15	8.0	
Other ethnicity	5	2.7	
Educational qualification			
Diploma	45	24.1	
First Degree	68	36.4	
Masters	24	12.8	
Residency	34	18.2	
PhD	16	8.6	
Profession			
Nurse	101	54.0	
Physician	31	16.6	
Physiotherapist	15	8.0	
Pharmacist	17	9.1	
Medical Laboratory Scientist	10	5.3	
Nutritionist	13	7.0	

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Table 2: Migration Intentions Among Health Care Workers (HCWs)

Variable	Frequency (F)	Percentage (%)
Currently considering practicing outside Nigeria		
No	47	25.1
Yes	140	74.9
Total	**187**	**100.0**
Country of intention to migrate and practice		
United State of America	22	11.8
United Kingdom	17	9.1
Canada	148	79.1
Total	**187**	**100.0**
Made any effort to effect migration intention		
No	21	11.2
Yes	166	88.8
Total	**187**	**100.0**

➢ *Predictors of International Migration Intentions Among Health Workers*

Table 3: Socio-Economic Predictors of International Migration Intentions Among Healthcare Workers

Psycho-Social Reasons for Migration Intentions	SA F (%)	A F (%)	D F (%)	SD F (%)
Curiosity to travel abroad	81(43.3)	68(36.4)	26(13.9)	12(6.4)
Opportunity to earn more money (work related)	146(78.1)	29(15.5)	5(2.7)	7(3.7)
Opportunity to change lifestyles	42(22.5)	28(15.0)	75(40.1)	42(22.5)
Personal (poor economic conditions)	94(50.3)	71(38.0)	11(5.9)	11(5.9)
Political instability	55(29.4)	69(36.9)	20(10.7)	43(23.0)
Insecurity	72(38.5)	45(24.1)	45(24.1)	25(13.4)
Unemployment	42(22.5)	41(21.9)	81(43.3)	23(12.3)

SA- Strongly agree, A-Agree, D- Disagree & SD- Strongly disagree

Table 4: Job Related Predictors Influencing International Migration Intentions Among HCWs

Job Related Reasons	SA F (%)	A F (%)	D F (%)	SD F (%)
Poor remuneration	87(46.5)	69(36.9)	15(8.0)	16(8.6)
High workload (burn out)	104(55.6)	29(15.5)	21(11.2)	33(17.6)
Poor working environment	79(42.2)	90(48.1)	13(7.0)	5(2.7)
Lack of modern working equipment	110(58.8)	30(16.0)	18(9.6)	29(15.5)
Tribalism in career progression	13(7.0)	17(9.1)	108(57.8)	49(26.2)
Lack of health insurance	28(15.0)	24(12.8)	115(61.5)	20(10.7)
Poor Welfare packages	133(71.1)	34(18.2)	11(5.9)	9(4.8)
High cost of living	51(27.3)	104(55.6)	16(8.6)	16(8.6)

SA- Strongly agree, A-Agree, D- Disagree & SD- Strongly disagree

Table 5: Strategies for Reducing Healthcare Workers International Migration

Strategies for Reducing Migration of HCWs	SA F (%)	A F (%)	D F (%)	SD F (%)
Free health insurance	136(72.7)	34(18.2)	10(5.3)	7(3.7)
Flexible work arrangement	97(51.9)	74(39.6)	10(5.3)	6(3.2)
Increase financial incentives	79(42.2)	108(57.8)	--	--
Improve welfare packages	73(39.0)	104(55.6)	6(3.2)	4(2.1)
Staff development support	68(36.4)	108(57.8)	6(3.2)	5(2.7)

SA- Strongly agree, A-Agree, D- Disagree & SD- Strongly disagree

➢ *Testing of Hypotheses*

H_{01}: There is no significant relationship between socio-demographic variables (age, sex, profession, level of education, marital status) and migration intention among health workers in Nigeria

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Table 6: Relationship Between Socio-Demographic Variables and Migration Intention

Socio-Demographic Characteristics	Migration Intention				Total		Df	X^2	P-value
	No		Yes						
	F	%	F	%	F	%			
Age group									
20-29years	14	7.5	28	15.0	42	22.5	**3**	**2.87**	**0.41^{ns}**
30-39years	13	7.0	55	29.4	68	36.4			
40-49years	15	8.0	44	23.5	59	31.6			
50years	5	2.7	13	7.0	18	9.6			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
Sex									
Male	13	7.0	39	20.9	52	27.8	**1**	**0.01**	**0.97^{ns}**
Female	34	18.2	101	54.0	135	72.2			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
Marital Status									
Single	0	**0.0**	**22**	**11.8**	**22**	**11.8**	**3**	**18.8**	**0.00***
Married	47	25.1	95	50.8	142	75.9			
Single parent	0	0.0	17	9.1	17	9.1			
Widow(er)	0	0.0	6	3.2	6	3.2			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
Educational level									
Diploma	24	12.8	21	11.2	45	24.1	**4**	**46.5**	**0.00***
First degree	23	12.3	45	24.1	68	36.4			
Masters	0	0.0	24	12.8	24	12.8			
Residency	0	0.0	34	18.2	34	18.2			
PhD	0	0.0	16	8.6	16	8.6			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
Profession									
Nurse	47	25.1	54	28.9	101	54.0	**5**	**53.4**	**0.00***
Physician	0	0.0	31	16.6	31	16.6			
Physiotherapist	0	0.0	15	8.0	15	8.0			
Pharmacist	0	0.0	17	9.1	17	9.0			
Medical Lab. Sci.	0	0.0	10	5.3	10	5.3			
Nutritionist	0	0.0	13	7.0	13	7.0			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			

***Significant at α = 0.05**

H_{02}: There is no significant relationship between working conditions and migration intention among health workers in Nigeria

Table 7: Relationship Between Working Conditions and Migration Intention Among Health Workers

Working Conditions	Migration Intention				Total		Df	X^2	P-value
	No		Yes						
	F	%	F	%	F	%			
Poor remuneration									
Strongly agree	0	0.0	16	8.6	16	8.6	**3**	**72.1**	**0.00***
Agree	0	0.0	15	8.0	15	8.0			
Disagree	0	0.0	69	39.6	69	39.6			
Strongly disagree	47	25.1	40	21.4	87	46.5			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
High workload									
Strongly agree	0	0.0	33	17.6	33	17.6	**3**	**50.1**	**0.00***
Agree	0	0.0	21	11.2	21	11.2			
Disagree	0	0.0	29	15.5	29	15.5			
Strongly disagree	47	25.1	57	30.5	104	55.6			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
Poor working environment									
Strongly agree	0	0.0	5	2.7	5	2.7	**3**	**85.8**	**0.00***
Agree	0	0.0	13	7.0	13	7.0			

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Disagree	0	0.0	90	48.1	90	48.1			
Strongly disagree	47	25.1	32	17.1	79	42.2			
Total	**47**	**25.1**	**57**	**30.5**	**104**	**55.6**			
Lack of modern working equipment									
Strongly agree	0	0.0	29	15.5	29	15.5	**3**	**43.9**	**0.00***
Agree	0	0.0	18	9.6	18	9.6			
Disagree	0	0.0	30	16.0	30	16.0			
Strongly disagree	47	25.1	63	33.7	110	58.8			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			
Lack of health insurance									
Strongly agree	0	0.0	20	10.7	20	10.7	**3**	**165.9**	**0.00***
Agree	0	0.0	115	61.5	115	61.5			
Disagree	19	10.2	5	2.7	24	12.8			
Strongly disagree	28	15.0	0	0.0	28	15.0			
Total	**47**	**25.1**	**140**	**74.9**	**187**	**100.0**			

***Significant at α = 0.05**

➢ *Table 1: Socio- Demographic Characteristics of the Hcws*

Majority of the HCWs were females (72.2%) and majority were married (75.9%). The commonest age range was between the ages of 30 and 39 (36.4%), with a mean age of 37.2 ± 9.2 years. Highest qualification was first degree (36.4%) followed by Residency program for doctors (18.2%). Majority of the respondents were Nurses with (54.0 %) which was closely followed by physicians (16.6%)

➢ *Table 2: Intention to Migrate Among Hcws*

Analysis of intention to practice outside Nigeria revealed that more than two-third of the respondents (74.9%) while a high number (79.1%) of the participants chose Canada as their country of interest. Majority of the respondents (88.8%) have also taken several steps and efforts to actualize their intention.

➢ *Table 3: Socio-Economic Predictors of Migration Intention*

The most prevalent predictors of the decision to migrate was the opportunity to earn more money (78.1%) as strongly agreed by some respondents while curiosity to travel abroad (43.3%) was next. Only a minority agreed that unemployment and opportunity to change life style (22.5%) was their reason for the intention to migrate

➢ *Table 4: Job Related Predictive Factors Responsible for Migration Intention*

Majority (71.1%) of the respondents strongly agreed that poor welfare package was a major job related predictor of the intention to practice abroad, 58.8%strongly agreed on lack of modern equipment while 55.6 % agreed that burn out factor can trigger intention to migrate abroad. The least of the job related factors was tribalism at work.

➢ *Table 5. Strategies For Reducing Healthcare Workers International Migration*

The strategies for reducing the urge or intention to migrate were also investigated. Result shows that 72.7 % agreed on free health insurance, 97% on flexible work arrangement while no participant disagreed with increase financial incentives as a strategy for reducing migration among HCWs

➢ *Table 6. Relationship Between Socio-Demographic Variables and Migration Intention*

Relationship between socio-demographic variables (age, sex, profession, level of education, marital status) and migration intention among health workers was tested with Chi-square analysis and presented in Table 6. The result showed significant ($p<0.05$) relationship between migration intention and the healthcare workers marital status ($X^2= 18.8$; p-value= 0.00*), educational level ($X^2= 46.5$; p-value= 0.00*) and profession ($X^2= 53.4$; p-value= 0.00*). The null hypotheses that there is no significant relationship between socio-demographic variables (age, sex, profession, level of education, marital status) and migration intention among health workers is rejected and the alternative hypothesis was accepted.

➢ *Table 7. Relationship Between Working Conditions and Migration Intention Among Health Workers*

Relationship between working conditions and migration intention among health workers was tested with Chi-square analysis and presented in Table 7. The result showed significant ($p<0.05$) relationship between migration intention and the working conditions with their p-values = 0.00*). The null hypotheses that there is no significant relationship between working conditions and migration intention among health workers is rejected and the alternative hypothesis was accepted.

VIII. DISCUSSION

This study focused on international migration intention and the Nigerian heath care workers. Migration intention (74.9%) as evident in the findings is higher than what was reported in a similar study.[32,33] .Reasons for this may be due to the current economic hardship and rising inflation resulting from the removal of fuel subsidy. The general view reveals that this policy has increase the inability of the average Nigerian worker to meet the daily needs.

Most health care workers (79%) as revealed by this study preferred to migrate to Canada than other countries. This might have resulted from the relaxed visa policy in Canada and the high demand for HCWs from African

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec701

counties. Another predictive factor is the high value of the Canadian currency.

Many factors of intention were examined and most participants (78.1%) agreed that remuneration is a driver of migration intention. A comparism of wages earned in Canada and UK shows that Nigerian HCWS earned far less than their counterparts in advanced countries. This study also confirmed that nurses had higher international migration intention than medical doctors and Pharmacists which supports the earlier study[34.] Nurses by their job description contribute as much as medical doctors to health care delivery, yet they are paid far less than medical doctors despite their sacrifices to the Nigeria's health sector as observed in an earlier similar study[35]. This finding might be a reflection of meeting their expectation of being well remunerated as occurs to their counterparts in countries like Canada and the likes in agreement with an earlier finding .[36]

Investigation of the strategies for halting the mass exodus of health care workers also revealed that no participant disagreed with increased financial incentives as an important tool to discourage this migration challenge which has bedeviled the Nigerian health care system in recent times. This study has shown that not only wages but other incentives like educational relief packages, free health care and insurance policies are also germane to retain skilled health care workers in the Nigerian health sector.

IX. LIMITATIONS

This study was carried out as a survey using a cross-sectional study design and a non-randomized sampling technique. This does not permit the generalization of our findings on migration among HCWs in Nigeria. Some limitations to our study include our inability to use the online survey method among HCWs due to network issue in the study area and there is a possibility that some of the responses may not actually come from HCWs. This may confounded our findings.

Furthermore, the intention of HCWs is not synonymous with real migration as most HCWs may not be granted the VISA. Hence, our findings may not portray the actual migration issues around HCWs in Nigeria.

X. CONCLUSION

Many Nigeria HCWs appear to have emigration intention most especially the nurses and medical doctors. The predictors of the intention to migrate may be associated with poor remuneration and inappropriate work environment HCWs. The government may explore strategies to mitigate the emigration intention of the HCWs in Nigeria. New policies that will reduce migration intention and actual migration should be urgently put in place to curb the menace of brain drain in the Nigerian health sector. Based on the findings,, we recommend policies that would increase HCWs' salary and improve economic condition and equip health care facilities with world class equipment unlike the present situation where facilities are merely consulting clinics.

- *Authors Contribution*

All authors contributed to the research design and ensured data collection. Oye MJ conceived the idea and drafted the manuscript. Data analysis was conducted by Famakinde A. The revision of the manuscript and entire submission process was critically done by Adeniran JA and Famakinde A.

- *Funding*

This research received no specific grant from any funding agency.

- *Conflict of Interest*

The authors declare that they have no affiliations with any organization. There was no financial interest or non-financial interest in the subject matter of this manuscript.

- *Conclusions*

HCWs in Nigeria appear to have high migration intention and nurses top the category of those who are more likely to be willing to migrate than doctors and pharmacists. The Nigerian government should institute strategies to mitigate the migration intention of the HCWs to retain skilled workers in the health sector in other to revive the ailing health care delivery system.

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